Introduction to the Military Transfusion Medicine Consultants

American Association of Blood Banks Annual Meeting

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Armed Services Blood Program Session

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Transfusion Medicine

- Medical management of the donor-patient relationship:
  - Safe, efficient donations of red cells, white cells, stem cells, and platelets
  - Cell processing, testing, storage and delivery
  - Effective transfusion outcomes and assessments
- Consultative evaluations and procedures
  - Therapeutic apheresis and plasma exchange
- Collaborative research and protocol design

Military Transfusion Medicine

- Cornerstone of patient care in operational settings
- Weapon-related and environmental injury and disease
- Unique patient-donor relationships
  - May be simultaneously co-located or separated by great distances in time and space
- Specialized logistical and clinical networks
- Balanced needs
  - Red cells, plasma, platelets, stem cells for patients
  - Health, well-being and readiness of donors

Military Transfusion Medicine Consultants

"… Director ASBPO tasked to establish a transfusion medicine consultation body made up of transfusion medicine physicians from each of the three services"

"… physicians should have transfusion medicine and preferably operational experience, and must be available for consultation on a regular basis"

Military Transfusion Medicine Consultants

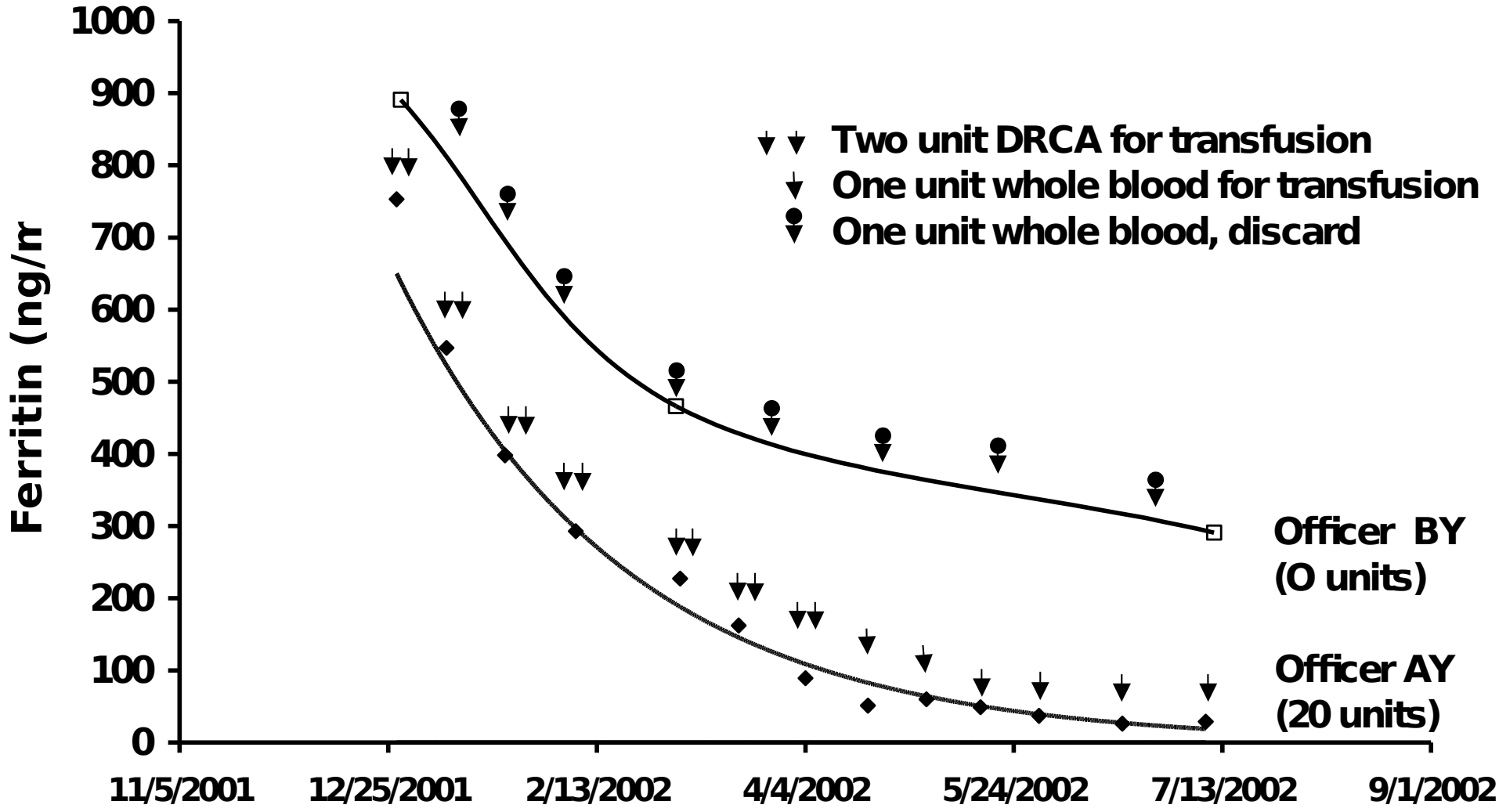
"...*provide input and advice to ABCC on:*

proper use of new and current blood products, evaluation of blood donation drug lists, perhaps most importantly - establishment and education of good transfusion practices"

"... meet at least semi-annually, or when a need is identified by ASBPO, ABCC or consultation body members"

"... be available for theatre telemedicine transfusion consultation"

Ferritin Levels and Blood Obtained for Transfusion in Two Active Duty, Identical Twin Brother, Army Aviators with Hereditary Hemochromatosis Treated Using Two Different Phlebotomy Programs



Transfusion Medicine Certification

- Minimum one year fellowship after internal medicine/hematology or clinical pathology
  - Two years after surgery, ER, other specialties
  - Board eligibility available for physicians with extensive prior experience - ie, “grandfather”
- Consultant backgrounds include hematology and anatomic/clinical pathology

Blood in the Battlefield

- WW1 - 22 November 1918
  - Physiologists prefer saline, clinicians prefer blood
- WW2 - Army policy = pooled, dried plasma
  - Hepatitis, lack of efficacy → switch to blood

- Clinical experience WW2, Korea
  - Group O whole blood up to battalion aid stations
  - Stored in ice in melted water, < 4 week outdate

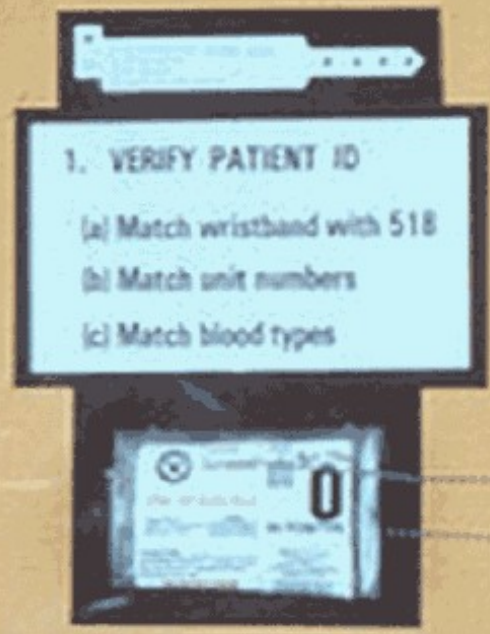
Battlefield Transfusion Medicine Issues

- “Division level” transfusions ODS
  - High demand for group O red blood cells
  - Long air evacuation routes, constrained access
  - Co-location of forward surgical teams
  - Casualty flow and blood availability are not constant
- Future use will be complex, fluid and essential
  - Wide variety of injuries, operational settings
  - Requirement for pathogen inactivation, apheresis collections, and other emerging blood therapies may significantly impact availability, safety and efficacy

HBOC and Red Cell Transfusions on the Battlefield

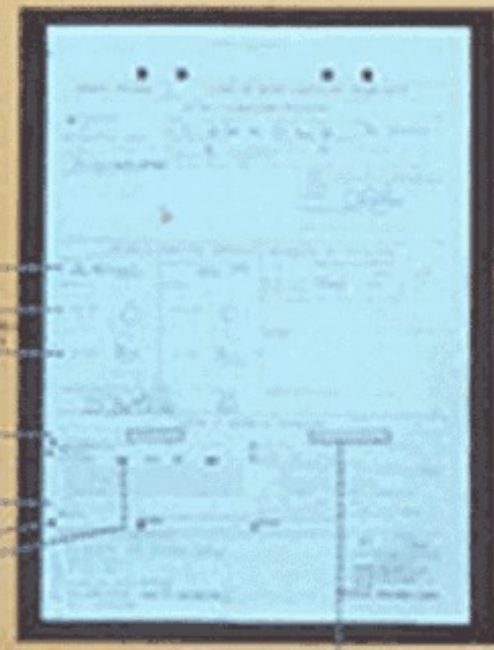
- HBOC
  - Tremendous potential logistical advantages
  - Impact, efficacy and safety not fully defined
    - **Plasma of WW2?**
    - **Red cell equivalent of the future?**
- Packed red blood cells
  - Tremendous force multiplier
  - Licensed, efficacious, “known” product
  - Year 2002 “BAS” equivalent not fully defined

TRANSFUSE SAFELY



1. VERIFY PATIENT ID
   (a) Match wristband with 518
   (b) Match unit numbers
   (c) Match blood types

FORM 518



2. RECORD INITIAL DATA AND SIGN
   Obtain verification
   Add initial vital signs

3. OBSERVE TRANSFUSION FOR 5–10 MINUTES; GIVE BLOOD WITH NORMAL SALINE ONLY

4. RECORD POST TRANSFUSION DATA

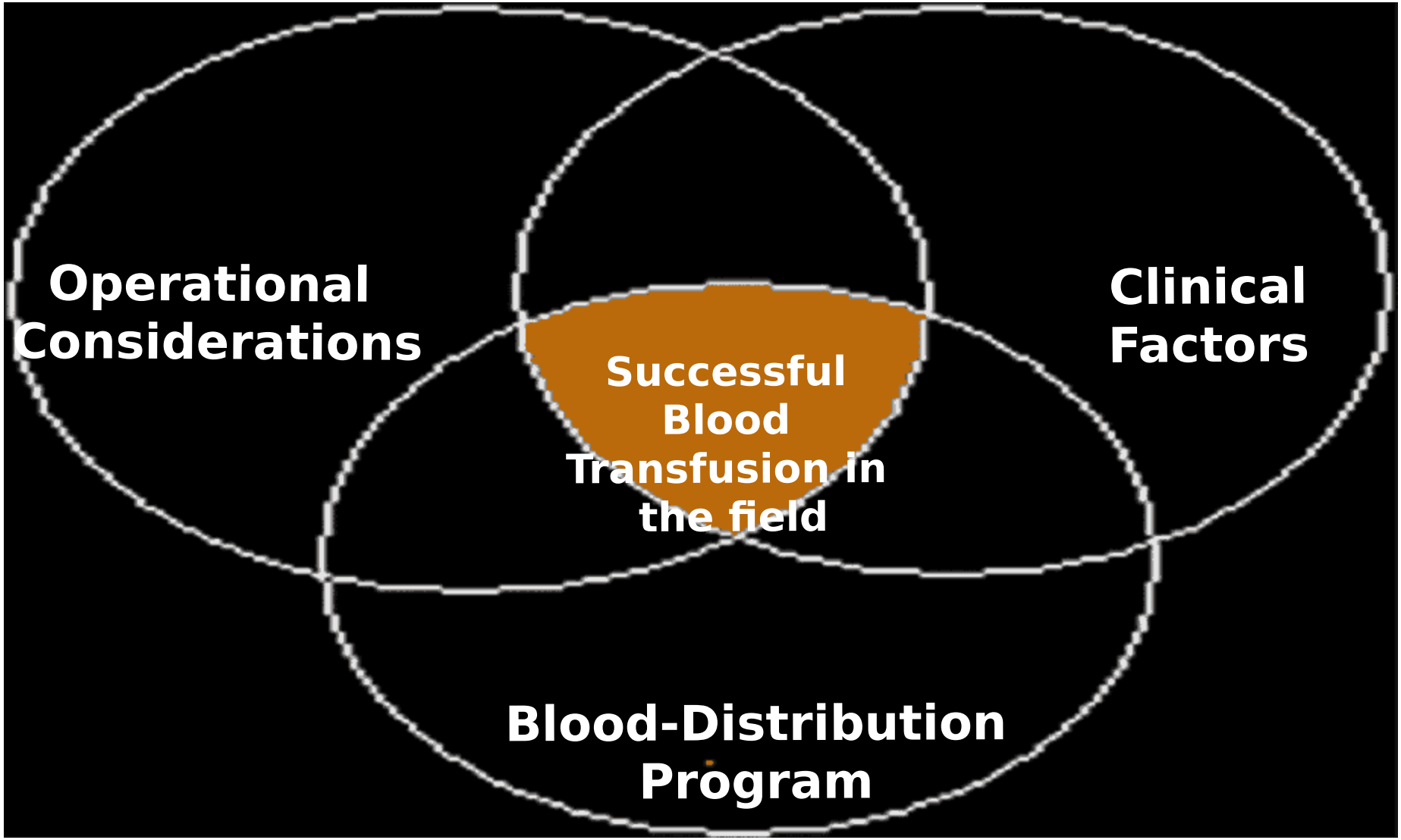
5. RETURN 518s TO CHART AND BLOOD BANK

XVIIIth Airborne Corps Experience

Division-Level Blood Policy Development

10 12'90

Successful Battlefield Transfusion Practice



References

- **Bolan CD and Webster NR. “Military Transfusion Medicine” Zajtchuk R, Grande CM, eds. Anesthesia and Perioperative Care of the Combat Casualty. In Zajtchuk R, Bellamy RF, eds. Textbook of Military Medicine. Washington DC: US Department of the Army, Office of the Surgeon General, and Borden Institute: 1995, pgs 341-373.**

- **Bolan CD. “Transfusion Medicine for General Medical Officers” Military Unique Curriculum Web Site, AMEDD Center and School, July 2001**

Army - CD Bolan COL MC

- Interests - operational medicine, apheresis, ABO incompatibility, hemochromatosis blood donation
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